

1 11835-65 BWT(1)/EPA(a)-2 T4-10/P1.1 ASD(a)-5/BSD/ASD(m)-3/AS(mp)-2/
 AFMD(t)/AFETR/ESD(dp)/ESD(gs)/ESD(t)
 ACCESSION NR: AP4048426 S/0181/64/006/011/3444/3451

AUTHOR: Plakida, N. N.

TITLE: Allowance for the Coulomb interaction in the calculation of
 the conductivity of a metal

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3444-3451

TOPIC TAGS: electric conductivity, dielectric constant, impurity
 conductivity, Coulomb interaction, metal physical property

ABSTRACT: An equation is derived for the two-particle Green's func-
 tion, and the electric conductivity and dielectric constant of a
 metal in an inhomogeneous longitudinal electric field are calculated.
 Similar equations, with allowance for the Coulomb interaction be-
 tween electrons only or for the impurity or phonon background only,
 were considered by the author earlier (DAN SSSR, v. 147, 1067, 1962).
 It is shown that allowance for the Coulomb interaction between elec-

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1-11835-45

ACCESSION NR: AP404B426

2

trons in the calculation of the impurity conductivity of the metal, with neglect of the electron-electron collisions, leads to screening of the external field, to screening of the scattering potential, and to slight additional scattering in the region of high frequencies. Allowance for the electron-electron scattering will be made in a succeeding paper. "The author thanks D. N. Zubarev for continuous interest in the work and for discussions." Orig. art. has: 22 formulas.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 17Jan64

ENCL: 00

SUB CODE: 33, NM

SR REF SOV: 004

OTHER: 005

PLAKIDA, N.M.

Calculating the tensor of electroconductivity. Dokl. AN SSSR
147 no.5:1067-1070 D '62. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
Predstavleno akademikom N.N. Bogolyubovym.
(Electric conductivity) (Calculus of tensors)

BA

During growth with phytonutrient, E. A. Flabida, N. S. Legutina, and E. I. Novikova (Vysokaya i Vozrastnaya, 1968, No. 10, 65-68; Med. Akad., 1961, 22, 68).--(Larvae were kept in fresh condition for up to 6 months by confining them in closed tubes together with shreds of brownish. The results are attributed to

the anesthetic action of a "phytonutrient" on excretion from the brownish.

C. B. NORTH

GOLAND, Sh.N., kand. tekhn. nauk; LEDENTSOV, N.M., inzh.; NIKOLAYEV, A.S., inzh.; PAVLENKO, V.T., inzh.; PLAKIDA, M.A., kand. tekhn. nauk; PORADNYA, A.I., doktor tekhn. nauk; SPIRIDONOVA, O.M., kand. tekhn. nauk; SVYATSKIY, P.S., inzh.; FEDORTSOV, B.D., inzh., retsenzent; KAPLAN, M.Ya., red. izd-va; PUL'KINA, Ye.A., tekhn. red.

[Handbook of finishing operations] Spravochnik po otdelochnym rabotam. Pod red. A.I.Poradnia i O.M.Spiridonovoi. Leningrad, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam, 1961. 497 p. (MIRA 14:7)

1. Leningrad. Upravleniye po zhilishchnomu i grazhdanskomu stroitel'stvu.

(Finishes and finishing)

PIAKIDA, N.M.

Allowing for Coulomb interaction when calculating the work function of a metal. Fiz. tverd. tela + no.11:3446-3451, 1962.

(MIRA) (R1)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.

L 46331-65 EWT(1)/EPA(s)-2/REC(t) FL-4/Pt-7 IJP(o) 00

ACCESSION NR: AF5009219

8/0020/65/161/001/0088/0/91

AUTHOR: Plakida, N. N.

TITLE: On the calculation of the dielectric constant and conductivity of an electron-phonon system

SOURCE: AN SSSR. Doklady, v. 161, no. 1, 1965, 88-91

TOPIC TAGS: electron phonon system, dielectric constant, electric conductivity, two time Green function

ABSTRACT: The author calculates the dielectric constant and the conductivity on the basis of a Hamiltonian of the Bardeen-Pines type (D. Pines, The Many Body Problem, M. A. Benjamin, New York, 1961)

$$H = \sum_p \epsilon_p a_p^\dagger a_p - \frac{1}{2V} \sum_q \rho_q \rho_{-q} + \sum_q \Omega_q b_q^\dagger b_q + \sum_{p,q} \kappa_{p,q} (b_q + b_{-q}^\dagger),$$

(ϵ_p - energy of Bloch electrons in state with quasi-momentum p ; ρ_q - Fourier component of electron density). The electron-phonon interaction is written in the form

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ACCESSION NR: AP5009219

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$$\sum_{\mathbf{q}} \kappa_{\mathbf{q}, \mathbf{p}-\mathbf{q}} (b_{\mathbf{q}} + b_{-\mathbf{q}}^{\dagger}) \equiv -\frac{1}{V} \sum_{\mathbf{q}} v(\mathbf{q}) Z R_{\mathbf{q}, \mathbf{p}-\mathbf{q}},$$

from which the Fourier components $l_{\mathbf{q}}$ of the ion density oscillations can be obtained. Using the equations of motion for the creation and annihilation operators of electrons and phonons, based on the foregoing Hamiltonian, it is possible to find the equation for the two-time Green's functions with which a successive evaluation is made of the screening effect in the electron-phonon system. The results illustrate that the method of two-time Green's functions yields in very simple fashion the already known results concerning the dielectric constant of an electron-phonon system, and also takes correct account of the screening of the external field in the calculation of the conductivity. "I thank D. N. Zubarev for useful discussions." This report was presented by N. N. Bogolyubov. Orig. art. has: 15 formulas.

ASSOCIATION: Moskovskiy gosudarstvenny universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 15Oct64

ENCL: 00

SUB CODE: RP, EM

NR REF SOV: 005

OTHER: 008

Card 2/2

MOROZOV, A.P., red.; PLAKIDA, M.A., kand. tekhn. nauk, red.; ZHURAVSKIY,
B.A., red. izd-va; PUL'KINA, Ye.A., tekhn. red.

[Three-dimensional mesh-reinforced concrete articles] Armotsementnye
prostranstvennyye konstruktsii; sbornik nauchnykh soobshchenii. Le-
ningrad, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam,
1961. 138 p.
(MIRA 14:6)

1. Akademiya stroitel'stva i arkhitektury SSSR. Leningradskiy filial.
2. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR
(for Morozov)

(Reinforced concrete)

ACCESSION NR: AT4010619

S/3051/63/000/000/0354/0358

AUTHOR: Yakobi, V. A.; Plakidin, V. L.; Karpukhin, P. P.

TITLE: Catalytic oxidation of aromatic compounds by an ozone-oxygen mixture

SOURCE: Kataliticheskiye reaktsii v zhidkoy faze. Trudy Vsesoyuznoy konferentsii. Alma-Ata, 1963, 354-358

TOPIC TAGS: catalyst, catalytic oxidation, aromatic hydrocarbon, cobalt, oxygen, ozone, oxidation, cobalt oxidation catalyst

ABSTRACT: The author discusses the influence of the concentration of cobalt ions on the oxidation of 2-methyl-anthraquinone by an ozone-oxygen mixture using cobalt acetate as a catalyst with cobalt concentrations of 0.02, 0.16, and 0.28 gram-atoms/liter, yields of 17.6, 64, and 80%, respectively, of anthraquinone-2-carboxylic acid were obtained. A temperature rise above 85C reduced the yield. An earlier assumption that ozone reacts with the catalyst in the first stage of the process was confirmed. This confirmation permitted a stepwise oxidation of aromatic compounds without affecting the C-C bond of the ring. The catalyst widened the possible use of an ozone-oxygen mixture for the preparation of hydrocarbon derivatives containing oxygen. "V. G. Zhdanova and S. Ye. Pokhila took part in the experimental part of the work." Orig. art. has: 1 figure and 2 tables.

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ACCESSION NR: AT4010619

ASSOCIATION: Rubezhanskiy khimkombinat (Rubezhansk Chemical Combine)}Khar'kovskiy
politekhnicheskiy Institut (Khar'kov Polytechnic Institute)

SUBMITTED: 00

DATE ACQ: 25Jan64

ENCL: 00

SUB CODE: GC

NO REF SOV: 011

OTHER: 003

Card 2/2

KORNEYCHUK, V.D.; PLAKIDA, Ye.K.; ROSSOSHANSKAYA, V.A., red.;
DEYEVA, V.M., tekhn. red.

[Fertilizing vineyards]Udobrenie vinogradnikov. Moskva,
Sel'khozizdat, 1962. 205 p. (MIRA 15:10)
(Grapes—Fertilizers and manures)

PLAKIDA, Ye.K.; LAGUTINS'KA, N.O.

~~Ukrainian SSR~~

Variations of the isoelectric point of grape buds. Bot.zhurn.[Ukr.] 9 no.1:
70-75 '52. (MLA 6:11)

1. Institut vinogradarstva i vinorobstva im. Tairova m. Odessa.
(Electrophysiology of plants)

FLAKIDA, YF. K.

Viticulture

Feeding grapevines. Vin. SSSR 12 no. 3, 1951.

9. Monthly List of Russian Accessions, Library of Congress, June 1958. Unclassified.

1., Year.

2.

3. Grapes

7.

9. Monthly List of Russian Accessions, Library of Congress, ... 1953, Unclassified.

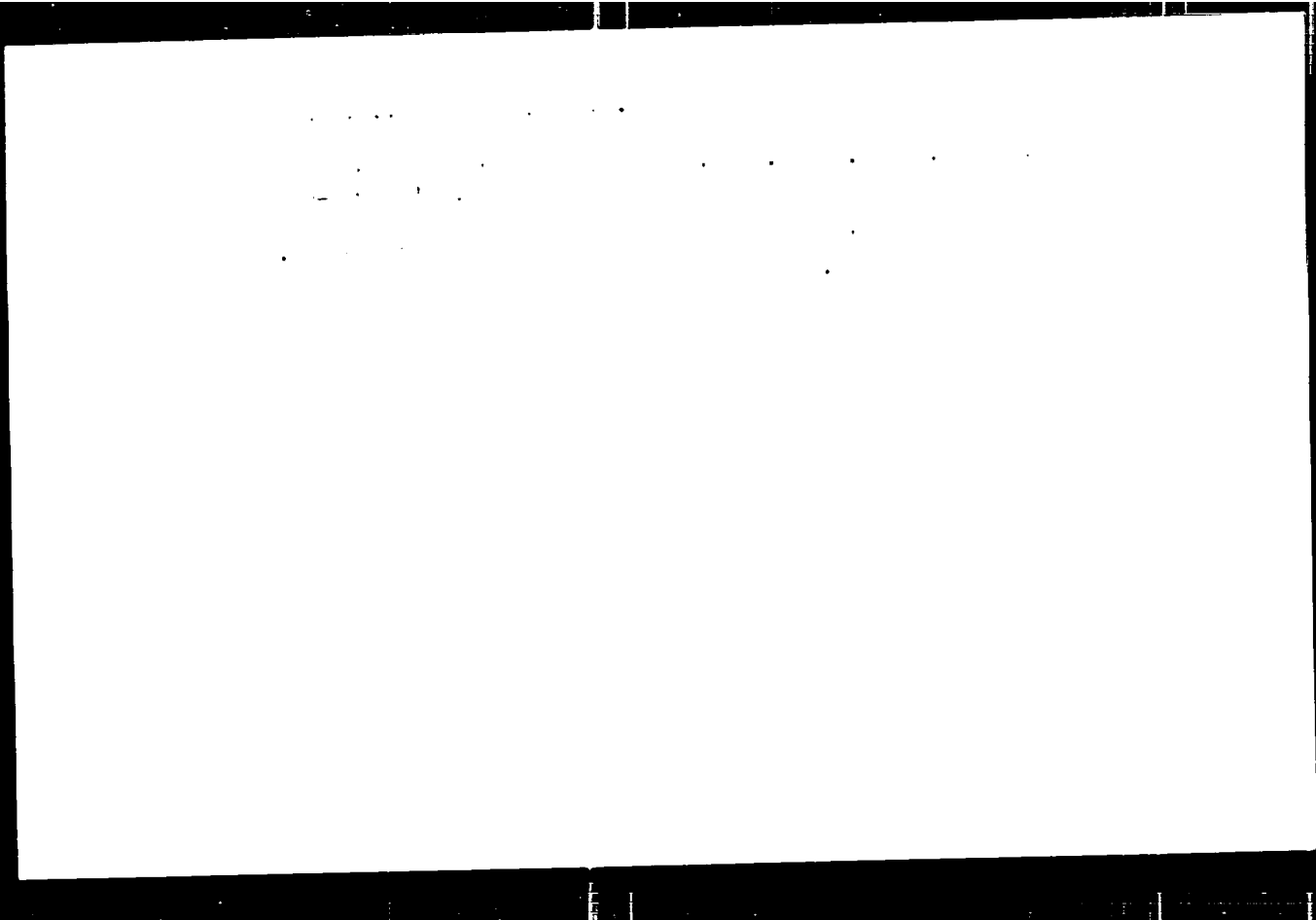
PLAKIDIN, D., konstruktor; SHEPENKOV, Ye., konstruktor (g.Bogorodsk)

The SM-557-L stationary motorboat engine. Za rul. 18 no.8:23
Ag '60. (MIRA 11:9)

(Motorboats--Gasoline engines)

"APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R001341



APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R0013411

PLAKIDIN, V.L.; BOGUSLAVSKAYA, I.L.

Synthesis of 4,9-difluorcanthanthrone. Zhur. VKHO 5 no. 5:597
'60. (MIRA 11:12)

1. Rubeshanskiy filial Nauchno-issledovatel'skogo instituta
organicheskikh poluproduktov i krasiteley imeni K.Ye. Voroshilova.
(Anthanthrone)

YAKOBI, V.A.; PLAKIDIN, V.L.; FORHILA, S.Ye.; KARPUKHIN, P.P.

Catalytic oxidation with an ozone-oxygen mixture. Part 1:
Oxidation of 2,2'-dibenzanthronyl. Zhur.ob.khim. 33 n. 10:
3369-3373 1963. (MIRA 10:11)

LAVRISHCHEV, V.A.; PLAKIDIN, Val.L.; KRETOV, A. Ye.

Preparation of amino compounds by the reaction of aromatic halo derivatives with fused urea. Izv.vys.ucheb.sav.; khim.i khim. (MIRA 13-6)
tekh. 3 no.1:127-129 '60.

1. Kafedra organicheskoy khimii Dnepropetrovskogo khimiko-tekhnologicheskogo instituta iz. P.D.Dzerzhinskogo i Rubeshanskiy filial nauchno-issledovatel'skogo instituta organicheskikh poluproduktov i krasiteley imeni K. Ye.Voroshilova.

(Amino compounds)

(Halogen compounds)

(Urea)

PLAKIDIN, Val.L.; REZNICHENKO, V.V.

Nitration of naphthalide and its derivatives. Ukr. khim. zhur.
26 no.6:733-735 '60. (MIRA 14:1)

1. Rubezhanskiy khimicheskiy kombinat i Rubezhanskiy filial
Nauchno-issledovatel'skogo instituta organicheskikh poluproduktov
i krasiteley im. K.Voroshilova.
(Naphthalene)

PLAKIDIN, Val.L; PAYN, V. Ya.

Bromination of 1,4-dihydroxy-5,8-dihydronaphthalene. Ukr. khim.
zhur. 27 no.2:244-246 '61. (MIRA 14:3)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley im. L. Ya. Veroshilova, filial, g. Rubeshnoye.
(Naphthalene) (Bromination)

PLAKIDIN, VI.L.; KRSTOV, A.Ye.

Preparation of acenaphthenequinone. Zhur. Prikl. Khim. 33: 1000
2-971 Ap '60. (MIRA 11:4)
(Acenaphthenequinone)

53610
AUTHORS:

Lavrishchev, V. A., Plakidin, Val. L.
Kretov, A. Ye.

5/153,60,001,01,03, 54
BC11, BOC5

TITLE:

Production of Amino Compounds by Interaction of Aromatic Halogen
Derivatives With Molten Urea

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy Khimiya i khimicheskaya
tekhnologiya, 1960 Vol 3, Nr 1 pp 27-29 (USSR)

TEXT: The authors state that the halogen atom in aromatic halogen derivatives during their fusion with urea is substituted by the amino group smoothly and with high yields. This applies to derivatives containing a nitro, sulfamido, alkylsulfonic, or arylsulfonic group in o- or p-position with respect to the halogen atom. The authors had proved previously that under these circumstances the halogen in o- and p-nitrochlorobenzene is not substituted at normal pressure even at 250° (confirmed by Ref 4). A similar reaction proceeds with o- and p-nitrochlorobenzene smoothly and with a high yield. The reaction with o-chloro-4-nitrophenyl-N-methylsulfamide took place with a somewhat lower yield (64% instead of 83%). The substitution under review is not possible with halogen derivatives having only one sulfonic or sulfamide group in o- or p-position with respect to the chlorine atom. The results show that under the given circumstances the

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Production of Amino Compounds by Interaction of
Aromatic Halogen Derivatives With Molten Urea

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B011/B005

halogen in the ring becomes only movable under the influence of at least 2 strong electron-acceptor substituents. They may be 2 nitro-, or one nitro- and one sulfonic or sulfonamide group. The reaction does not start below 180°, and proceeds very quickly, sometimes with a vigorous generation of gas. From the mixture of reaction products, cyanuric acid is also obtained, which forms in the thermal decomposition of urea. There are 1 table and 9 references, 1 of which is Soviet.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskii institut im. P. E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology imeni P. E. Dzerzhinskii) Rubeshanskii filial nauchno-issledovatel'skogo instituta organicheskikh poluproduktov i krasiteley im. K. Ye. Voroshilova (Rubeshnoye Branch of the Scientific Research Institute of Organic Semiproducs and Dyes imeni K. Ye. Voroshilov) Kafedra organicheskoy khimii (Chair of Organic Chemistry)

SUBMITTED: March 7, 1959

Card 2/2

LAVRISHCHEV, V.A.; PLAKIDIN, Val.L.; KRETOV, A.Ye.

Interaction of alkoxy and aryloxy derivatives of the aromatic series
with fused urea. Zhur. ot. khim. 10 no.9:1064-1072 8 '60.
(MIRA 11:2)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut i Ra zhen'skiy
filial Nauchno-issledovatel'skogo instituta organicheskikh
poluproduktov i krasitel'ov.
(Uren)

3/080/60/033/04 37 045

AUTHORS: Plakidin, V.I., Kretov, A.Ye.

TITLE: The Production of Acenaphthenequinone

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 4, pp 968 - 971

TEXT: A new method was developed for the production of acenaphthenequinone based on the formation of acenaphthenequinonemonooxime from acenaphthene and sodium nitrite in the presence of aqueous hydrochloric acid in a triethyleneglycol solution. The reaction is started by nitrosyl chloride which is formed by the interaction of nitrous acid with hydrogen chloride. The second stage of the reaction consists in the saponification of acenaphthenequinonemonooxime by a solution of sulfuric acid in the presence of formalin. After the end of the saponification commercial acenaphthenequinone is obtained and then purified through a bisulfite compound which is formed during heating with 10 - 11% solution of sodium bisulfite at a temperature of 100 - 102°C. The bisulfite compound is decomposed by a soda solution and the purified acenaphthenequinone is obtained with a melting point not lower than 254°C. The yield of acenaphthenequinone is 75 - 80% of the theoretical. All solvents which do not contain hydroxyl groups can

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The Production of Acenaphthenequinone

3080 60013 04 27 45

not be used for the synthesis of acenaphthenequinone monooxime. Among the hydroxyl-containing solvents the best results were obtained with triethyleneglycol. Metal filings of copper, aluminum, iron, and stainless steel reduce the yield of acenaphthenequinone considerably.

There are 2 tables and 6 references, 3 of which are Soviet and 3 German.

SUBMITTED: July 6, 1959

Card 2/2

REZNIKHENKO, YURIY MIKHAYLOVICH

Nitrates of heavy metals and its derivatives.
 31.04.385-387.1966.

1. Kuberianskiy filial na khimicheskoye tekhnicheskoye
 organicheskikh polupr. dutoy i krasiteley. Kuberianskiy
 khar'kovskogo politehnicheskogo instituta.

KRASOVITSKIY, B.M.; PLAKIDIN, V.I.; KHOTINSKAYA, Ye.Ye.; BRAVCHENKO, E.F.;
GOLOMB, L.M.; ROMANOVA, M.G.

Vat dyes, derivatives of 1,8-naphthoylene-1',2'-benzimidazole-4,4'-
dicarboxylic acid imide. Zhur.prikl.khim. 36 no.6:1330-1334, 1963.
(MIRA 10:12)

1. Khar'kovskiy gosudarstvennyy universitet i Rubezhanskiy filial
Nauchno-issledovatel'skogo instituta organicheskikh poluproduktov
i krasiteley.

(Dyes and dyeing) (Benzimidazolecarboxylic acid)

5(1)

AUTHORS: Placidin, W. L., Sheen, S. L.

TITLE: Reactions of Sodium Salts of the β -Naphthalenesulfonic Acid With a Solution of Caustic Soda (Vzaimodeystviya natriyevoy soli beta-naftalicheskoy kisloty s razvedennym roztvorem natra)

PERIODICAL: Khimicheskaya promyshlennost', 1966, No. 1, p. 100.

ABSTRACT: The reaction mentioned in the title is of considerable interest for developing a convenient method of preparing β -naphthol. Since publication data in this connection are very meagre (Refs 1-5) the kinetics of this reaction was examined which took place between a 99.5% sodium- β -naphthyl sulfide and NaOH solutions with concentrations of 20, 10, and 5% at temperatures of 300-390° (and the corresponding vapor pressures of 100-200). The influence of the NaOH concentration

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Reactions of Sodium Salts of the β -Naphthalene-sulfonic Acid
 Acid with a Solution of Caustic Soda

temperatures above 300° and then decreases in rate. At a certain reaction (transformation of (I) into other products) to a certain degree of the transformation, a linear function of the (I) output of the NaOH concentration exists. An increase of the NaOH excess leads to an increase in the output, and the output with an excess of 10 parts by weight of time of 30-40 minutes amounts to 90-92% and to 95-96% with an excess of a 75% excess. Na_2SO_3 and Na_2CO_3 added to 11 parts by weight of 5-8% do not affect the output or quality of the product. There are 5 figures and references, 2 of which are in Russian.

Card 2/2

FAYN, V.Ya.; GOLOMB, L.M.; PLAKIDIN, Val.k.

Study of vat sols dyeing red. Zhur.prikl.khim. 34 no. 7:1640-1642 71
'61. (MIRA 14:7)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i
krasiteley imeni K.Ye.Voroshilova, filial v g. Rubeshnoye.
(Dyes and dyeing)

PLAKIDIN, Val.L.; FAYN, V.Ya.; TRUNOV-KRASOVSKIY, V.I.

Preparation of 1-methylantraquinone by diene synthesis. Zhur.
prikl.khim. 34 no.7:1643-1645 J1 '61. (MIRA 24:7)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley imeni K.Ye.Voroshilova, filial v g. Rubeshnoye.
(Anthraquinone) (Olefins)

FAYN, V.Ya.; PLAKIDIN, Val.L.

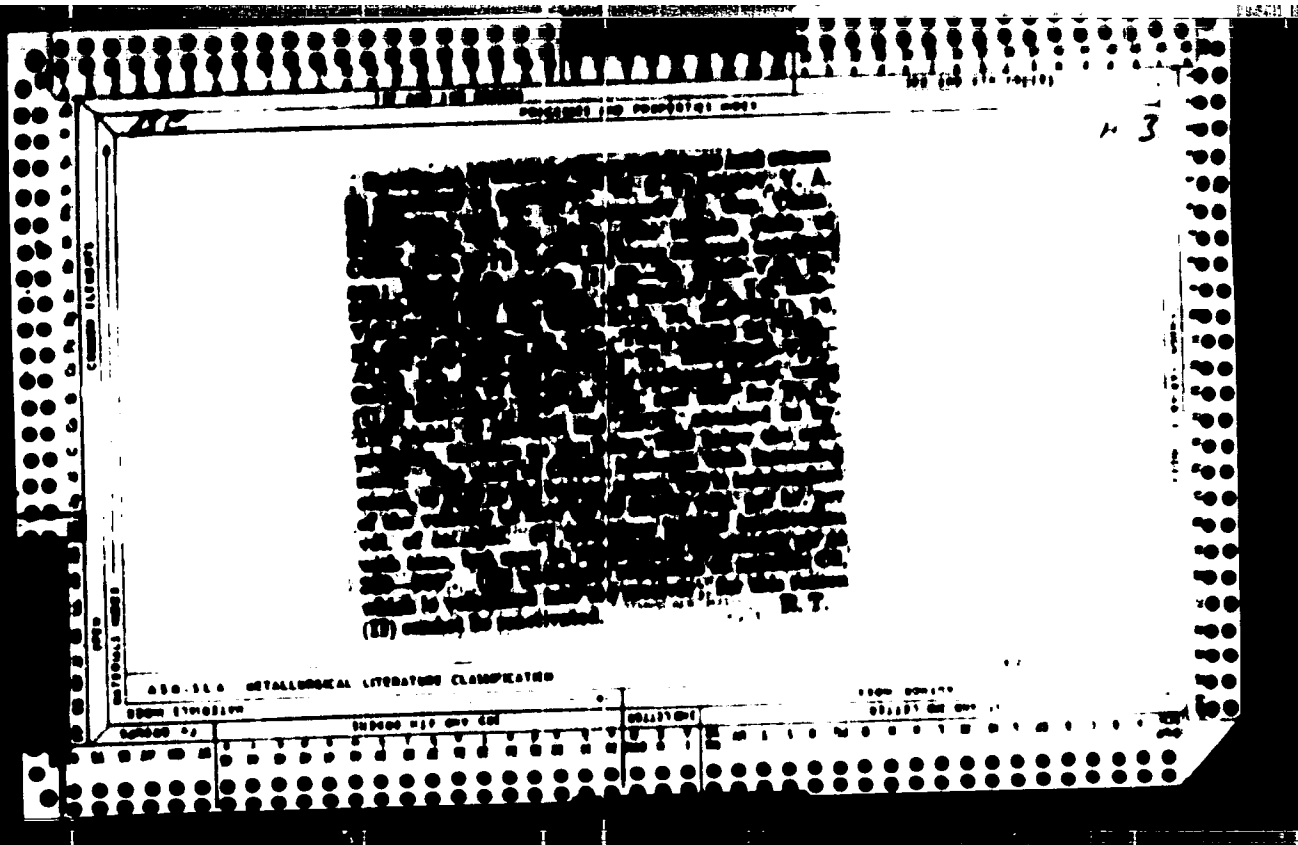
Nitration of 1-methylantraquinone. Zhur.ob.khim. 31 no.5:1588-
1589 My '61. (MIRA 14:5)

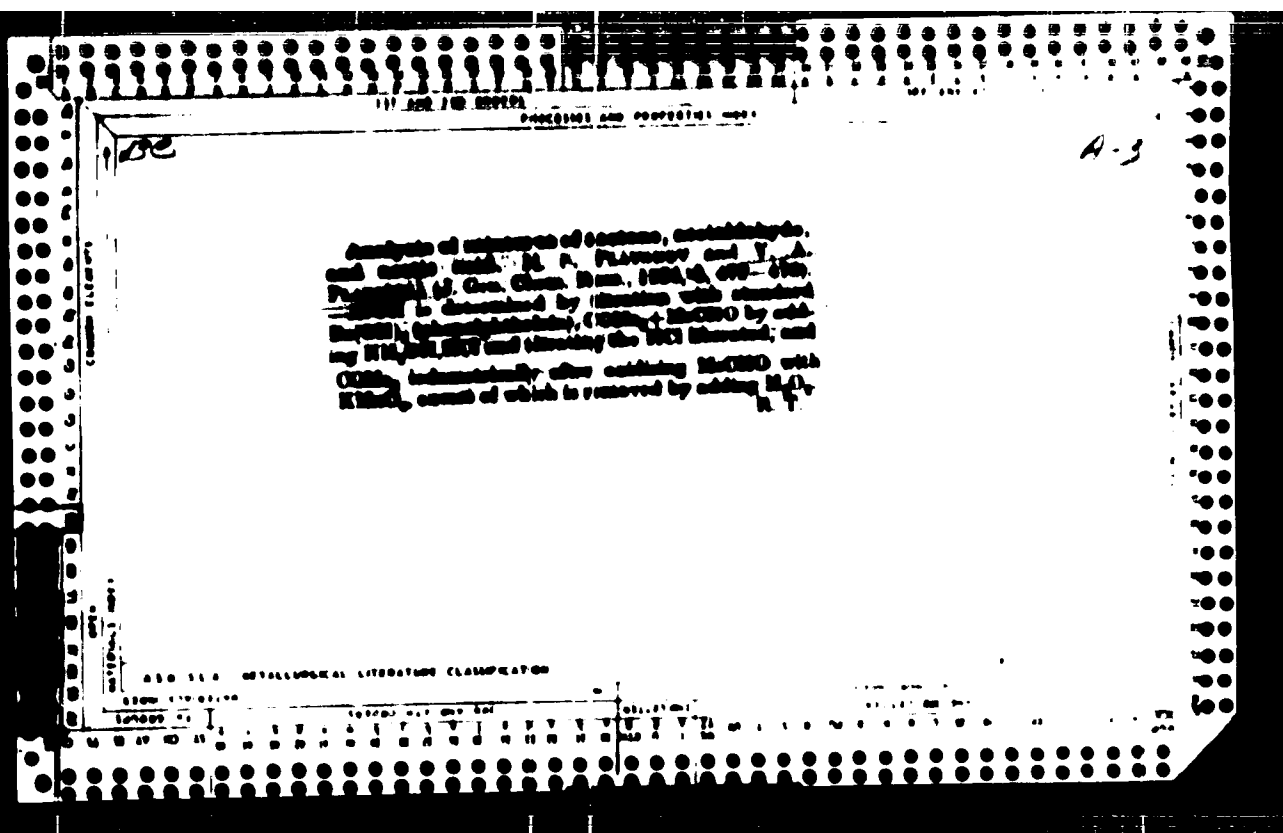
1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley, filial v g. Rubeshnoye.
(Anthraquinone) (Nitration)

CO

Analysis of mixtures of acetone, acetaldehyde and acetic acid M. S. Plotnikov and V. A. Plakhotnik. *J. Gen. Chem.* U.S.S.R. 6, 4726, 1934. The proposed method for the determination of MeCO, AcH and AcOH in mixtures obtained in the catalytic conversion of C₂H₄ to MeCO, of C₂H₄ 20 (1934) resulted from an experimental study of the existing methods of determination of MeCO, AcH and AcOH in mixtures (unpublished). The AcOH in a sample is titrated with NaOH, with phenolphthalein as indicator. To determine the sum of MeCO and AcH, the mixture is treated with 0.1 N neutralized HCl, HCl water, allowed to stand for 30-40 min. with occasional shaking, and titrate the residual HCl against the sum of AcH and MeCO with NaOH against methyl orange. According to Marcano (C. 4, 20, 282) MeCO reacts with the salt of NaOH in a 1:1 ratio. Hence the results must be multiplied by 1.0001.

The mixture with a high content of AcOH is then the AcOH is determined by titration of a sample of the mixture with NaOH, the value of the sum obtained with HCl water, and the value of the sum obtained with NaOH is subtracted from the value of the sum obtained with HCl water to give the value of MeCO. The value of MeCO is then multiplied by 1.0001 to give the value of MeCO. The value of AcH is then determined by subtracting the value of MeCO from the value of the sum of MeCO and AcH. The value of AcOH is then determined by subtracting the value of MeCO and AcH from the value of the sum of MeCO, AcH and AcOH.





ESOP, H.; HELLAM, H.; HOLLMANN, R.; JAMES, H.; KANASAAR, E.; KROON, A.;
PLAKK, P.; PUUSEPP, E.; RIIKOJA, H.; FLAKS, E., tekhn. red.

[General electric engineering] Uldine elektrotehnika. By Esop, E.
dr. Tallin, Eesti Riiklik Kirjastus, 1954. 948 p. (MIRA 1:1)
(Electric engineering)

PLAKK, P.M.

Instruments with thermistor transducers for measuring minor
velocities of air and water. Priborostroenie no. 1:26-28 Mr '50.
(MIRA 12:4)

(Flowmeters)

PLAKS, P.M., kand.tekh.nauk, dotsent

Capacitance measuring two-terminal network. izv. vys. ucheb. zap.
energ. 6 no.12:123-124 D '63. MIRA 17:1

1. Tallinskiy politekhnicheskii institut.

8(2) 10(3), 9(6)

SOV 1979

AUTHOR:

Plakk, S. V., Candidate of Technical Sciences

TITLE:

Instruments for the Measurement of Small Velocities of the Air and Water With a Thermistor Transducer (Pribory dlya izmereniya malykh skorostey vozdukh i vody s datchikom-termistorom)

PERIODICAL: Prihorostroyeniya, 1979, Nr 1, pp 24-26 "SBR"

ABSTRACT:

Small air velocities (0 - 1 m/sec) are measured by means of electrical anemometers with platinum- or nickel wire. Such anemometers exhibit certain disadvantages: in particular a high operational temperature of the wire (200 - 300 °C), a comparatively large feeding current (0.2 - 1 A) and a low mechanical strength. No suitable instrument has hitherto been designed for the measurement of low water velocities (0 - 20 cm/sec). Attempts to use a platinum wire instrument failed. If the platinum wire is replaced by a rod-like thermistor, the properties of the transducer material vary in the following manner:

Card 1/3

Instruments for the Measurement of Small Velocities of the Air and Water
With a Thermistor Transducer

	platinum	thermistor
specific resistance in ohms.mm ² /m	0.106	10
temperature coefficient of the resistance per °C	0.0039	0.01

A temperature rise of 20-50°C is considered adequate for an electric thermistor anemometer to ensure good accuracy of measurement. This requires a current of 5-30 milliamperes in the thermistor for a rod-thickness of a few millimeters. The variation of the resistance of the anemometer thermistor as a function of air velocity is measured by means of a bridge circuit. The circuit diagram of the bridge is discussed in detail. The temperature of the thermistor is only little dependent on air temperature, the relationship between these two quantities being linear. The voltages generated at the thermistor at various air temperatures are exponentially dependent on air temperature. If, however, the aforementioned bridge circuit is used, the measured quantity indicating the velocity is independent of air temperature. A cylindrical

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Instruments for the Measurement of Small Velocities of the Air and Water
With a Thermistor Transducer

SOV 11311

A portable electrical anemometer with a thermistor was developed by the author. This anemometer basically consists of a bridge which provides for a constant current intensity in the thermistor. This instrument is fed by three torch batteries connected in series. The influence of air temperature is compensated by means of a thermoresistor. In 1950 air currents were measured successfully. The author also developed an instrument for laboratory purposes which permits measurements of air currents up to velocities of 1.5 m/sec. This instrument, however, is unsuited for measurements in the vicinity of strongly heated surfaces. From 1956 - 1957 the author succeeded in developing transducers consisting of thermistors for an instrument whereby small velocities of water (0 - 20 cm/sec) are measured. The transducers developed on the basis of thermoresistors (RTT) are illustrated in a figure. Such instruments can also be used in surveying ocean currents. There are 4 figures and 1 table.

Card 3/3

PLAKHIN, Aleksandr Samoylovich, kand.med.nauk; SHEFER, Sof'ya
Stanislavovna, kand.med.nauk; KHOTSIANOV, L.K., prof., red.;
STRELKOVA, L.A., red.-metodist; KAINSON, I.Ya., tekhnred.

[Industrial hygiene at machine-building enterprises; study
materials for workers and foremen] Gigena truda na predpri-
yatiakh mashinostroitel'noi promyshlennosti; materialy dlia
sanitarii s rabochimi i masterami. Pod red. L.K.Khotsianova.
Moskva, In-t sanitarnogo prosv.M-va zdravookhreneniia SSSR,
1959. 84 p. (MIRA 14:1)

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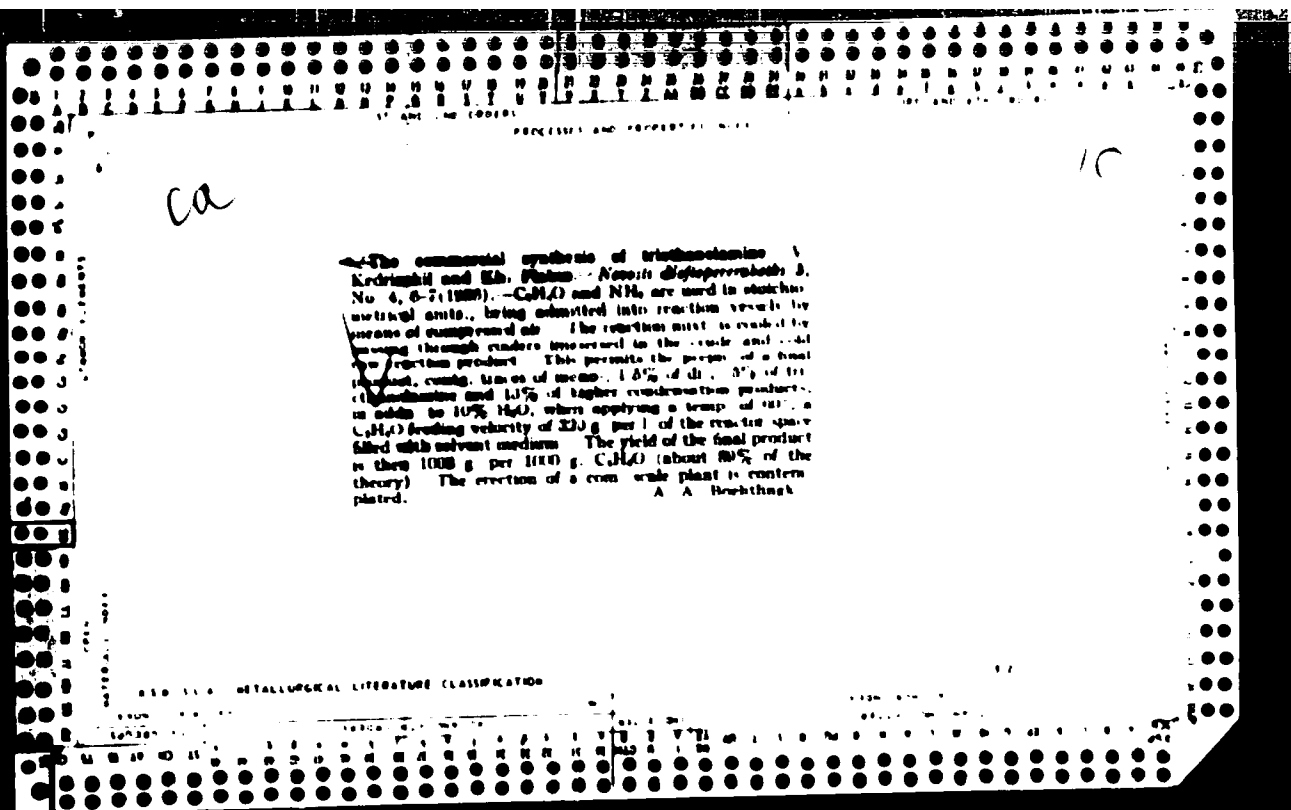
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17
✓ Regularities of the structure of the metamorphic rock facies in the Precambrian of the Kuznetsk Alatau. Dokl. Akad. Nauk S.S.S.R. 112, 506-510 (1967). The lowest portions of the Precambrian in the area of the magnetic anomaly are crystalline schists and gneisses, the middle horizons Fe-quartzites, the upper layers schists and limestones. The Fe-quartzites show a regular increase in magnetite, and a decrease in hematite with decreasing thickness of the rock bodies. With increasing magnetite contents, SiO_2 and Al_2O_3 are also increased. Layers enriched in hematite occurring within the magnetite quartzites show high-Fe-amphibole as a crystalline phase on the contacts. Also ore-free schists included in the magnetite quartzites always show systematic transition zones with increasing Fe contents. This rule is also not disturbed by local alkali metasomatites. An extensive petrographic description of the three principal portions mentioned above is given, with a table of characteristics of the magnetite and hematite quartzites, their lithological classification, the limit between, in vol. Fe, Al_2O_3 , silica, etc. Fe, their relative geological positions, and phys. and gen. conditions. For the magnetite quartzites their primary and secondary alteration conditions of low O_2 potential, low H_2O content are characteristic, while the hematite quartzites were deposited in deeper seas, in more pronounced oxidation conditions, higher H_2O , and have lower Fe contents. A schematic diagram is given for the cycle of the deposition mechanisms which shows the depths of the sedimentation and the diagenetic factor of the formation of the rock complex.

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PLAKSENKO, N.A.

Patterns in the structure of the metamorphic rock strata of the
Pre-Cambrian in the Kursk magnetic anomaly. Dokl. AN SSSR 112
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Selecting optimum pantograph sizes for high speeds. Shor.
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Comparison of brake paths in using rheostat and auxiliary
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Diagram of electric locomotive power circuits. Elek. i topl. tiaga
no. 4:48 Ap '58 (MIRA 12:1)
(Electric circuits) (Electric railway motors)

32(3)

SOV/112-59-5-9107

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5, p 100 (USSR)

AUTHOR: Plaks, A. Y.

TITLE: Investigation of Pantograph Functioning With High-Speed Trains

PERIODICAL: Sb. Leningr. in-ta inzh. zh.-d. transp., 1957, Nr 155, pp 15-28

ABSTRACT: Functioning of P-3 and DZh-5 pantographs on an experimental SN motive-power unit with speeds up to 130 km/hr was investigated in 1956 on the Moscow-Klin railroad that has a half-compensated catenary suspension. As a result of oscillographic studies, that in part had original schemes (oscillographic loop connected via a magnetic amplifier), it has been found that (1) at speeds over 100 km/hr, the current collection qualitatively changes due to considerable vibration of the contact wire, (2) if the spacing between two lifted pantographs is equal to the wire span, resonant vibrations of the messenger are possible at high speeds, (3) in designing contact lines for high-speed transportation, measures to prevent resonance should be taken.

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Investigation of Pantograph Functioning With High-Speed Trains

(4) the design of the upper subassembly of a high-speed pantograph should ensure equal pressure on both bows, a sufficient play, and should eliminate free oscillation of bows. (5) in selecting the pantograph place, the aerodynamic effect of the oncoming air stream should be taken into account

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Card 2/2

32(3)

SOV/112-59-5-9110

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 5, p. 90. USSR

AUTHOR: Dunenkov, V. L., Nekrasov, V. I., Plaks, A. V., Sheleshkov, K. K.
and Yarchuk, A. Ya.

TITLE: Investigation of Electrical Equipment of Type N8 Electric Locomotive

PERIODICAL: Sb. Leningr. in-ta inzh. zh.-d. transp., 1957, Nr 155, pp 29-44

ABSTRACT: To introduce final corrections, the scheme of a type N8 electric locomotive had been tested under various conditions before serial manufacturing of the locomotive was started. Under regenerative braking conditions, the current reached 2,000 amp. On the section where the sub stations had no inverter equipment, the contact-wire voltage reached 4,200 v with NB-406 traction motors operating normally. Investigation of the transients accompanying the transition to series connection showed that sometimes, under regenerative conditions, the residual EMF of traction motors is so combined with the contact-wire voltage that voltages up to 5,100-6,000 v appear on the motor brushes. This caused flashovers from energized motor parts and

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Investigation of Electrical Equipment of Type N8 Electric Locomotive

equipment to ground. To eliminate such overvoltages, it was suggested that the motors next to ground be short-circuited. To eliminate burning of contacts of the braking switch under transient conditions, it was recommended that two contactors be used for breaking the traction-motor field circuit when regeneration is cut off. Tests of a new laminated-core D-4 relay showed that it provides a satisfactory differential protection of the power circuit. Better protection, under traction conditions, is realized by introducing starting resistors; its operating time is 0.1-0.2 sec, the motor current being reduced to one-third of its value. Investigation of the functioning of the protective system under regenerative conditions permitted setting a course for solving this important problem. Forced ventilation is recommended for improving the operating conditions of "fekhral" resistors. Detailed investigations of air exchange within the locomotive body permitted providing some recommendations on how to improve the ventilating system. Bibliography. 3 items.

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Investigating the interaction of current collectors and the
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(MIRA 13:0)

(Electric railroads--Wires and wiring)

DUNENKOV, V.L.; LAPIN, V.B.; PLAKS, A.V.

Conference on a.c. electric traction. Elektrichestvo no.10:
88-89 ('61. (MIRA 14:10)
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RABINOVICH, A.A., inzh.: NIKRASOV, V.I., inzh.: PLAKS, A.V., inzh. (Leningrad)

Broadening the field of using railroad motorcar trains. Zhel. dor.
transp. 40 no.12:48-51 D '58. (MIRA 12:51)

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(Railroad motorcars)

DUMENKOV, V.L.; NEKRASOV, V.I.; PLAKS, A.V.; SHELESHEV, K.K.; YARCHUK, A.Ya.
(Leningrad)

Investigation of some parts of the electric equipment of M8
electric locomotives. Elek.i tepl.tiaga no.10:18-19 0 '57.
(MIRA 10:11)

(Electric locomotives)

ACC NR: AP7006229

(A, N)

SOURCE CODE: UR/0078/67/012/001/0062/0067

AUTHOR: Rashkovich, L. N.; Koptsik, V. A.; Volkova, Ye. N.; Izraïlenko, A. N.;
Plaks, E. M.

ORG: Physics Department, Moscow State University (Fizicheskiy fakul'tet, Moskovskiy gosudarstvennyy universitet)

TITLE: Some properties of aqueous solutions of $\text{NH}_4\text{H}_2\text{PO}_4$ and $\text{ND}_4\text{D}_2\text{PO}_4$

SOURCE: Zhurnal neorganicheskoy khimii, v. 12, no. 1, 1967, 62-67

TOPIC TAGS: ammonium phosphate, deuterium compound, deuterium oxide

ABSTRACT: The solubility of $\text{NH}_4\text{H}_2\text{PO}_4$ (ADP) and $\text{ND}_4\text{D}_2\text{PO}_4$ (D-ADP) and the density, refractive index and conductance of their aqueous solutions were studied in order to make use of the corresponding concentration and temperature relationships for the control of the crystallization process. The deuterated compound was prepared by successive crystallizations of ADP from heavy water. The solubility of ADP and D-ADP was found to be linearly related to the temperature: $c = 26.21 + 0.4463 t$, and the solubility of D-ADP in D_2O surpasses that of ADP in H_2O by about 8%. A plot of the density of the ADP and D-ADP solutions versus their concentration gave a linear dependence. The refractive index data are described by the linear relationships

$$n_{\text{ADP}} = 1.3309 + 0.00138c,$$

$$n_{\text{D-ADP}} = 1.3285 + 0.00138c.$$

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